

REMARKS

Claims 27-86 are pending in the present application. Claims 27-86 have been rejected. No claims have been allowed.

II. Claim Rejections under 35 U.S.C. § 112, first Paragraph

It is well settled that the specification need not reproduce the exact language of the claims to satisfy the written description requirement of §112, first paragraph. In re Wright, 9 USPQ2d 1649, 1651 (Fed. Circ. 1989) (“the claimed subject matter need not be described in haec verba in the specification in order for that specification to satisfy the description requirement”). The written description requirement of §112 can even be satisfied based solely on the drawings of a patent application. Vas-Cath Inc. v. Marhurkar, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991) (“These cases support our holding that, under proper circumstances, drawings alone may provide a ‘written description of an invention as required by §112’”).

Further, MPEP 8th edition, section 2163.07(a)-Inherent Function, Theory, or Advantage recites,

By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter. *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F. 2d 1376, 178 USPQ 279 (CCPA 1973). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

Applicant believes “a flexible display comprising a plurality of addressable pixels,” described in the pending claims is inherently described in the specification. As evidence of support, Applicant recites technical definitions for pixels and LCDs from two sources: 1) Webopedia and 2) The “Computer Desktop Encyclopedia,” by Alan Freedman, ISBN 0-8144-0012-4, ©1996. The Federal Circuit has cited definitions from online technical dictionaries, such as Webopedia, for determining definitions of terms for the purposes of claim construction (See, e.g., *Eolas Technologies, Inc. Vs.*

Microsoft Corp., 73USPQ2d1782,1792). In addition, support from the specification is also provided. The following examples are provided are for illustrative purposes only and are not meant to be exhaustive or limiting in regards to the scope of the embodiments that are associated with the pending claims.

Publication of instant application, USPN 20030060269, paragraph 18 recites, *Turning to FIG. 2, there is depicted a slot machine reel 40 in accordance with one embodiment of the present invention. As illustrated, the reel 40 may include a flexible display panel 42 mounted to an outer circumference 44 of an internal or supporting portion 46 of reel 40. The flexible display panel 42 may be a LCD panel, or a LED display panel capable of being shaped to mount to the outer circumference 44 of reel 40. The flexible display panel 42 may be further capable of displaying an infinite number of possible indicia relevant to game play. The flexible display panel 42 may be a panel having at least one flexible portion which allows the flexible display panel to be bent, without sharp angles, and yet still maintain the display quality associated with well known, non-flexible LCD or LED display panels. One example of a flexible display panel 42 is a LCD panel described in U.S. Pat. No. 6,016,176 to Kim et al. Another example of a flexible display panel 42 is a Flexible Organic Light Emitting Device ("FOLED") developed by Universal Display Corporation, Ewing, N.J. The slot machine reel 40 may further include one or more integrated circuits 48 which process appropriate data to control display of the various indicia.*

Definitions:

From Computer Desktop Encyclopedia:

LCD (Page 485)-A display technology that uses rod-shaped molecules (liquid crystals) that flow like liquid and bend light.

Passive Display (Twisted Nematic [TN] and Supertwisted Nematic[STN]) Called “passive matrix” when used for computer screens. All active electronics transistors are outside of the display screen. **Active addressing** improves STN display by **addressing pixels** differently.

Active Display (TFT) Typically used for laptop color screens, thus called “active matrix” displays. Transistors are built into each pixel with the screen.

Pixel (Page 664)- The smallest element on a video display screen. A screen is broken up into thousands of tiny dots, and a pixel is one or more dots that are treated as a unit. A pixel can be one dot on a monochrome screen, three dots (red, green and blue) on color screens, or clusters of these dots.

OLED (Not found)

From Webopedia:

LCD-Short for liquid crystal display, a type of display used in digital watches and many portable computers. LCD displays utilize two sheets of polarizing material with a liquid crystal solution between them. An electric current passed through the liquid causes the crystals to align so that light cannot pass through them. Each crystal, therefore, is like a shutter, either allowing light to pass through or blocking the light. Monochrome LCD images usually appear as blue or dark gray images on top of a grayish-white background. Color LCD displays use two basic techniques for producing color: Passive matrix is the less expensive of the two technologies. The other technology, called thin film transistor (TFT) or active-matrix, produces color images that are as sharp as traditional CRT displays, but the technology is expensive. Recent passive-matrix displays using new CSTN and DSTN technologies produce sharp colors rivaling active-matrix displays.

Passive Matrix Display: A common type of flat-panel display consisting of a grid of horizontal and vertical wires. At the intersection of each grid is an LCD element which constitutes a single pixel, either letting light through or blocking it. A higher quality and more expensive type of display, called an active-matrix display, uses a transistor to control each pixel.

Pixel- Short for Picture Element, a pixel is a single point in a graphic image. Graphics monitors display pictures by dividing the display screen into thousands (or millions) of pixels, arranged in rows and columns. The pixels are so close together that they appear connected.

The number of bits used to represent each pixel determines how many colors or shades of gray can be displayed. For example, in 8-bit color mode, the color monitor uses 8 bits for each pixel, making it possible to display 2 to the 8 th power (256) different colors or shades of gray.

On color monitors, each pixel is actually composed of three dots -- a red, a blue, and a green one. Ideally, the three dots should all converge at the same point, but all monitors have some convergence error that can make color pixels appear fuzzy. The quality of a display system largely depends on its resolution, how many pixels it can display, and how many bits are used to represent each pixel. VGA systems display 640 by 480, or about 300,000 pixels. In contrast, SVGA systems display 800 by 600, or 480,000 pixels. True Color systems use 24 bits per pixel, allowing them to display more than 16 million different colors.

OLED- Short for organic light-emitting diode, a display device that sandwiches carbon-based films between two charged electrodes, one a metallic cathode and one a transparent anode, usually being glass. The organic films consist of a hole-injection layer, a hole-transport layer, an emissive layer and an electron-transport layer. When

voltage is applied to the OLED cell, the injected positive and negative charges recombine in the emissive layer and create electro luminescent light. Unlike LCDs, which require backlighting, OLED displays are emissive devices - they emit light rather than modulate transmitted or reflected light.

OLED technology was invented by Eastman Kodak in the early 1980s. It is beginning to replace LCD technology in handheld devices such as PDAs and cellular phones because the technology is brighter, thinner, faster and lighter than LCDs, use less power, offer higher contrast and are cheaper to manufacture.

Applicant believes the “plurality of addressable pixels” utilized in the pending claims are consistent and inherent to the flexible displays described in the specification which are shown and described at least with respect to FIG. 2. The plurality of addressable pixels are used to provide, as described in the specification, a flexible display panel 42 that is “capable of displaying an infinite number of possible indicia relevant to game play.” As described in the definitions recited above, one of skill of the art reading the specification would recognize that the flexible display panel, which may be LCD, LED, OLED, etc. would include a plurality of addressable pixels. Therefore, consistent with MPEP 2163.07(a), Applicant believes the introduction of the term “plurality of addressable pixels” in the claims, doesn’t add new matter and respectfully requests the Examiner to withdraw the rejection under 112, first paragraph.

III. Claim Rejections under 35 U.S.C. § 102 and 103 in regards to Griswold

Claims 27, 28, 33, 34, 38, 41-43, 47, 48, 53, 57-60, 63, 64, 66, 67, 69, 70, 72, 73, 76, 79-84 and 86 are rejected under 35 U.S.C. § 102(b) as being anticipated by Griswold, et al. (US 6,027, 115).

Claims 30, 32, 37, 44-46, 49-52, 54-56, 61, 62, 65, 68, 71, 77, 78 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griswold et al. (US 6,027,115)

Examiner recites in their rejection,

a support mechanism having an outer circumference region (feature 333); a flexible display mounted on said outer circumference (figures 2a-d and 4a) region of said support mechanism and comprising a plurality of addressable pixels (figures 2a-d and 4a, the leaves depicted in figures 2a-d are considered addressable pixels. A pixel as defined by one of ordinary skill in the art as the smallest element that can be individually processed in a video display system. The leaves are the smallest elements which are processed and displayed, therefore the constitute a pixel), said flexible display having a

Examiner says the leaves in figures 2a-d of Griswold are considered addressable pixels.

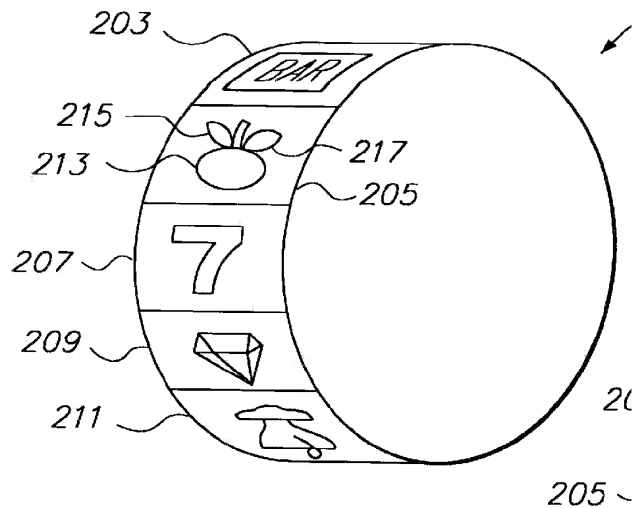


FIG. 2A

In Griswold FIG. 2A, shown above, the leaves, elements 215 and 217, are light elements of a fixed size and shape defining a symbol. When a current is applied to either element 215 or 217, light is emitted along the length of the element in the leaf shape. It would not be possible to output video in a video display system as maintained by the Examiner using two leaf elements. Further, the definitions of pixels provided above as are not consistent with the Examiner's interpretation of a "pixel." From "Webopedia" and the "Computer Desktop Encyclopedia,"

"A pixel is a single point in a graphic image. Graphics monitors display pictures by dividing the display screen into thousands (or millions) of pixels, arranged in rows and columns. The pixels are so close together that they appear connected" or "The smallest element on a video display screen. A screen is broken up into thousands of tiny dots, and a pixel is one or more dots that are treated as a unit."

As compared to these definitions, in Griswold, the two "leaves" are not points or dots. Light is emitted along the length of elements 215 or 217. Further, there two leaves not thousands of leaves comprising a video display system. In addition, the leaves are not connected and don't appear to be connected. Based on these definitions, Applicant doesn't see how one of skill of the art would interpret, the leaves in Griswold, as maintained by the Examiner, to be addressable pixels.

Examiner states Griswold teaches:

Said controller operable to: detect a deposit of medium of value, detect a wager, cause said indicium to be displayed on said flexible display, cause said motor to spin said reel, cause said motor to stop said reel, determine a value associated with an outcome of a wager based game played on the gaming apparatus, select from a plurality of game play indicia the indicium to display on the flexible display wherein combinations of the selected set of game play indicia including the indicium are used to display outcomes for a slot game played on the game machine using the reel and flexible display (3:1-63), and dynamically change the indicium displayed on the flexible display on the flexible display during the operation of the game apparatus such that a first indicium displayed at a first time on the flexible display is removed from the flexible display at a later time (3:26-31); and

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regions, which light elements can be illuminated independently of one another. Preferably, the one or more light elements are electroluminescent elements.

In a preferred embodiment, the reel also includes a circuit element provided on the reel strip for independently controlling the two or more light elements. In one specific embodiment, the circuit element includes a high frequency AC switch for controlling at least one of the light elements. The high frequency switch may include a bridge having (i) a switching transistor which controls delivery of power to at least one of the light elements and (ii) a plurality of rectifying diodes arranged to force current flowing through the switching transistor to flow in a single direction through the switching transistor regardless of which direction the alternating current flows.

Another aspect of the invention provides a method of performing a game play on a gaming machine. The method may be characterized as including the following steps: (a) determining that a user has initiated the game play; (b) spinning a plurality of reels on the gaming machine; (c) illuminating a light element provided on at least a portion of a symbol on one of the reels; and (d) stopping the reels from spinning such that a combination of symbols is displayed through a display window of the gaming machine. When the reels stop, the illuminated light element will be displayed through the display window.

The step of illuminating may illuminate only a portion of the symbol or the entire symbol. If the light element is an electroluminescent element, the step of illuminating may involve delivering an AC current of frequency between about 600 and 900 Hz to the electroluminescent element.

When the gaming machine includes multiple pay lines, the step of illuminating may illuminate only those symbols displayed that comprise a winning combination. In some embodiments, a winning combination may require that a light element is lighted. Thus, a combination displaying the light element when it is not lit does not represent a winning combination.

Yet another aspect of the invention provides a reel strip for use as a display portion of a slot machine reel. Such reel strips may be characterized as including the following elements: (a) a flexible substrate; (b) a first electrode formed on the substrate; (c) one or more electroluminescent elements formed on at least a portion of the first electrode; and (d) a second electrode formed over at least the electroluminescent elements. At least one of the first and second electrodes should be transparent. Often a second substrate, including inked images of symbols, will be affixed to the second electrode.

Preferably, the transparent electrode is made from indium tin oxide. To better isolate the electroluminescent regions, they may be surrounded by non-luminescent dielectric regions. Together the electroluminescent regions and surrounding dielectric regions are sandwiched between the first and second electrodes. The reel strip may also include one or more circuit elements controlling application of power to at least portions of the first and second electrodes. In a preferred embodiment, these circuit elements are integrated circuits.

These and other features and advantages of the invention will be described in more detail below with reference to the associated drawings.

The current claims recite that “said flexible display is operable to display an indicium comprising a pattern of the plurality of addressable pixels.” Further, controller is operable to “vii) select from a plurality of game play indicia the indicium to display on the flexible display wherein combinations of a selected set of game play indicia including the indicium are used to display outcomes for a slot game played on the gaming machine using the reel and the flexible display and viii) dynamically change the indicium displayed on the flexible display during the operation of the gaming apparatus such that a first indicium displayed at a first time on the flexible display is removed from the flexible display at a later time.” Griswold in Col. 3 and in particular Col. 3:26-30 merely describes providing power to different lighting elements. This does not teach or suggest selecting the indicium to display on the flexible display where the indicium comprises a pattern of the plurality of addressable pixels as recited in the pending claims.

In addition, the lighting elements as described in Col. 3:39-49 are an integral component of the flexible substrate. Providing power to the elements causes them to emit light and become more visible. Nevertheless, the lighting elements are always present in the flexible substrate whether they are emitting or not emitting light. These lighting elements can’t be removed from the substrate. Thus, it is not physically possible in Griswold, as the claims recite, to “dynamically change the indicium displayed on the flexible display during the operation of the gaming apparatus such that a first indicium displayed at a first time on the flexible display is removed from the flexible display at a later time.” Thus, Griswold can’t be said to anticipate this limitation.

Examiner states Griswold teaches:

The memory adapted for storing programming instructions or information for generating game play indicia including the indicium (6:6-31, inherently all processors and circuitry have memory used to store programming instructions).

Griswold Col: 6:6-31 recites,:

A printed circuit board **309** mounted on the interior of reel **301** contains at least some of the circuitry necessary for controlling the light elements on reel strip **303**. Printed circuit board **309** may include one or more integrated circuits **311** as shown. Control signals output from the circuitry on printed circuit board **309** is provided to reel strip connection **307** via a plurality of lines **313**.

Specifically, FIG. 3B shows supporting portion **333** or reel **301** rotates about an axis of rotation **315** and is driven by a drive motor **317**. Motor **317** also drives a slip ring drum **319** attached to axis of rotation **315**. Slip ring drum **319** includes multiple contacts connected to circuitry on printed circuit board **309** by a cable **321**. Thus, slip ring drum **319**, cable **321** and printed circuit board **309** all rotate together about the axis of rotation. Control signals from outside the reel are provided to the spinning reel by brushes **323** mounted to a brush block **325**. Signals to the brush block **325** are provided by a cable **327** which is mounted to a connector **329**. Lines from connector **329** are provided to a central processing unit (not shown) which controls the game's outcome. In one specific embodiment, the central processing unit is a custom gaming machine CPU such as the 80960 microprocessor manufactured by Intel Corporation and used in gaming machines available from IGT of Reno, Nev. The entire reel mechanism is mounted on a stand **331**.

Griswold describes circuitry that allows the light elements on the reel strips to be controlled, such as providing power to the “leaf” elements, 215 and 217, described with respect to FIG. 2a. Griswold doesn’t teach or suggest “the memory adapted for storing programming instructions or information for generating the game play indicia including the indicium” where the “flexible display is operable to display an indicium comprising a pattern of the plurality of addressable pixels.”

The Examiner recites,

A display driver (6:6-12, Griswold discloses circuitry necessary for controlling the light elements and therefore this inherently includes a display driver since all display electronics require some sort of driver to function) for controlling the plurality of addressable pixels of said flexible display coupled to the support mechanism and operatively coupled to the controller wherein the display driver receives instructions from the controller related to displaying the indicium; and

The claims recite, “a display driver for controlling the plurality of addressable pixels of said flexible display coupled to the support mechanism and operatively coupled to the controller wherein the display driver receives instructions from the controller related to displaying the indicium.” The Examiner has not provided any evidence that the circuitry needed to control the lighting elements in Griswold is compatible with or of the same type as the circuitry used for controlling a display with addressable pixels. Even if the circuitry were compatible, the number lighting elements in Griswold is significantly less the number of pixels that are controlled in the displays described herein. Thus, on this basis alone, the circuitry of Griswold would not be adequate for controlling the displays described herein. Thus, Griswold can’t be said to teach or suggest this limitation.

Therefore for at least the reasons cited above, Griswold can’t be said to anticipate or render obvious the remaining claims.

IV. Claim Rejections under 35 U.S.C. § 103, Griswold in view of Universal Display

Claims 31, 36, 40 and 75 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Griswold et al. (6,027, 115) in view of Universal Display: FOLED Technology.

Griswold, as recited in the Background of present application, describes a reel with electroluminescent display elements. The electroluminescent lighting elements are formed in a fixed pattern and integrated into the reel to form gaming symbols. These symbols rotate as the reel rotates. The lighting elements are more visible when power is supplied. Nevertheless, to change the gaming symbols the reels must be physically replaced.

Universal display describes a display. The reference makes no mention of gaming. Griswold doesn’t teach or suggest a flexible display that is operable to display an indicium comprising a pattern of the plurality of addressable pixels. Griswold merely teaches controlling power to various lighting elements, such as a lighting element configured in the

shape of a leaf. Griswold lacks teachings or suggestions regarding a number of additional features of the pending claims. For instance, it is not physically possible in Griswold, as the claims recite, to “dynamically change the indicium displayed on the flexible display during the operation of the gaming apparatus such that a first indicium displayed at a first time on the flexible display is removed from the flexible display at a later time.” The teachings regarding in Universal display don’t overcome this deficiency, as indicia for gaming are not described. Therefore, the combination of Griswold and Universal display can’t be said to render obvious the remaining claims.

V. Claim Rejections under 35 U.S.C. § 103, Griswold in view of The tube

Claims 29, 35, 39 and 74 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Griswold et al. (6,027, 115) in view of Business Week 2000: The tube.

Griswold, as recited in the Background of present application, describes a reel with electroluminescent display elements. The electroluminescent lighting elements are formed in a fixed pattern and integrated into the reel to form gaming symbols. These symbols rotate as the reel rotates. The lighting elements are more visible when power is supplied. Nevertheless, to change the gaming symbols the reels must be physically replaced.

The tube describes a display. The reference makes no mention of gaming. Griswold doesn’t teach or suggest a flexible display that is operable to display an indicium comprising a pattern of the plurality of addressable pixels. Griswold merely teaches controlling power to various lighting elements, such as a lighting element configured in the shape of a leaf. Griswold lacks teachings or suggestions regarding a number of additional features of the pending claims. For instance, it is not physically possible in Griswold, as the claims recite, to “dynamically change the indicium displayed on the flexible display during the operation of the gaming apparatus such that a first indicium displayed at a first time on the flexible display is removed from the flexible display at a later time.” The teachings in “the tube” regarding the display don’t overcome this deficiency as indicia for gaming are not described. Therefore, the combination of Griswold and the tube can’t be said to render obvious the remaining claims.

CONCLUSION

Applicants respectfully submit that all claims are in proper form and condition for patentability, and request a Notification of Allowance to that effect. If any fees are due in connection with this Response to Office Action or for this application in general then the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0388, referencing Docket No. IGT1P267. The Examiner is respectfully requested to contact the undersigned attorney at the telephone number below with any questions or concerns relating to this document or application.

Respectfully Submitted,
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